

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027576**Date Inspected:** 10-May-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** As noted below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS OBG**Summary of Items Observed:**

Quality Assurance Inspector (QA) Douglas Frey was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

**13E/14E-A2.1 (Exterior)**

This QA Inspector randomly observed ABF welder Kenneth Chappell (ID 3833) operate the Lincoln track mounted Submerged Arc Welding (SAW) wire fed crawler at the A2.1 joint of 13E/14E. This QA Inspector verified that the remote oven for the ESAB EN 760 Flux was in the on position with the dial set at 250° F. ABF welding Superintendent Dan Ieraci provided a remote temperature gauge to verify the flux temperature inside of the oven. This QA Inspector verified that the F7A2-EM12KH8 electrode spool was compliant with ABF-WPS-D1. 5-4042B-Revision 1. QC Inspector William Sherwood measured the parameters for amperage, volts, travel speed and the heat input as the welder adjusted the controls on the Lincoln track mounted wire feeder. On a subsequent observation, it was noted that the work at this location was completed and appeared to be in general conformance with the contract specifications.

**11E PP103 Suspender Bracket Modifications (Exterior)**

This QA Inspector made random observations of ABF welder Eric Sparks (ID 3040) performing SMAW utilizing E7018-H4R electrodes on the modification plates for the suspender brackets at 11E PP103. The welder was observed welding in the 3F vertical and 2F flat positions with QC Inspector William Sherwood present to

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monitor the welding and the parameters as they pertained to ABF-WPS-D1.5-F1200A. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work at this location had been completed on this date and appeared to be in general conformance with the contract documents.

### Tower 53M (Exterior)

This QA Inspector observed F.W. Spencer welder Damian Llanos ID# (6645) performing the Shielded Metal Arc Welding (SMAW) process in all positions on 2.5" and 4" schedule 80 pipe, located at the 53 meter elevation of the Tower on the exterior of the West Shaft. This QA Inspector verified the fit up of the joints and found it to be satisfactory and randomly observed QC Inspector Steve Jensen monitoring the welding to ensure the welding parameters were in compliance pertaining to WPS-1-12-1 Revision 2 (1.12). The welder was observed utilizing 6010 electrodes in the root pass with the balance using 7018 electrodes and cleaning the weld after each pass utilizing a wire wheel on a small disc grinder. The QA inspector made subsequent observations throughout the shift to monitor quality and noted that the work appeared to be in general conformance with the contract documents.

### 13E-E2.3 (Exterior)

This QA Inspector randomly observed ABF welder Mike Jimenez (ID 4671) pre-heat the Complete Joint Penetration (CJP) joint along 13E-E2.3 @ y+3910mm. QC Inspector William Sherwood verified the correct temperature as per the approved WPS and afterword's verified that the welding parameters (Amps and Travel Speed) were in accordance with ABF-WPS-D1.5-1040C-CU using E7018 4.0mm diameter electrodes drawing amperage of 135. This QA Inspector observed the welder performing the SMAW process in the 1G flat position conducting root and fill welding. The welder was observed cleaning the start/stop edges of the work utilizing a small disc grinder to smooth and blend the transitions and compressed air to clear the debris. On a subsequent observation, the welder was noted as continuing the production welding and between passes the QC Inspector verified the welding parameters and surface temperatures utilizing a Fluke 337 clamp meter to measure the electrical welding parameters and Tempilstik Heat Indicators for verifying the preheat and inter-pass temperatures. This QA Inspector noted that the electrodes were stored in electrically heated, thermostatically controlled oven after removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. This QA Inspector noted that the work by Mr. Jimenez was completed on this date and appeared to be in general conformance with the contract documents.

### Summary of Conversations:

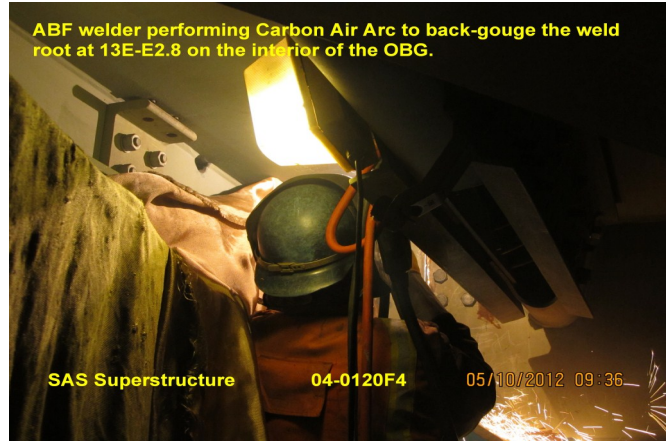
This QA Inspector had conversation with QA Lead Inspector Daniel Reyes about concerns regarding the back-gouging of the East Drop-In Panels.

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### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910 , who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Frey,Doug	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell,Bill	QA Reviewer

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